

PUTIN, O. N., and DULAN, K. I. A. I.

"Index of refraction of Hydrosols, 2," Zhuravsk, 61, 1302, 1929; Koll-Z,
48, 338, 1929.

ca

PROTECTIVE AND PROPERTIES INDEX

Protective properties of sols prepared by the tartaric acid method. A. V. DUMAN-
 SKII AND B. S. PUCHKOVSKI. *J. Russ. Phys.-Chem. Soc.* 62, 469-80(1930).—The
 protective effect of stannic hydroxide, silicic acid and titanic hydroxide sols, prepd.
 by the tartaric acid method, on gold sols diminishes with increasing dilution and with
 aging of the protective sol. Purple sols are obtained by the addn. of Ti to gold sols;
 these sols are coagulated by the addn. of NaCl, but the coagulum can readily be re-
 dissolved in water. Stannic hydroxide forms an adsorption complex with colloidal
 gold, which can be pptd. as a bluish black coagulum by the addn. of NaCl; this ppt.
 can be redissolved in water with the production of a red soln. B. C. A.

2

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

VII. Polytatomic oxygen derivatives in the synthesis of electronegative sols. A. Formation of the hydrosol $\text{Fe}(\text{OH})_3$ in the presence of polymeric carbohydrazides. A. J. DUMANNICK and H. S. PUCHONSKILL, *J. Russ. Phys.-Chem. Soc.* 62, 2249-56 (1930); cf. C. A. 25, 3809. In studying the peptizing effect of polymeric carbohydrazides on FeCl_3 (triangular diagrams) were constructed on the basis of 3 constituents: FeCl_3 , NaOH or NH_4OH and a carbohydrazide, such as dextrin, sol. starch, inulin and gum arabic. Areas of formation of ppts. of sols were mapped on these diagrams. The polymeric carbohydrazides serve in alk. soln. as peptizers by forming electroneg. hydro-sols. The peptization diagrams particularly of dextrin and inulin resemble to some extent those of sugars. Inulin is a better peptizer than dextrin. The diagrams for starch and gum arabic are distinguished by having the pptn. fields overlap into the electroneg. part, which indicates their sensitizing action. Gum arabic is more sensitizing than sol. starch. The formation of a difficultly settling turbidity is due to the protective property of the peptizer. Gum arabic has a greater protective action than sol. starch and its diagrams shows a large field of difficultly settling turbidity. The peptizing action of the carbohydrazides is inversely proportional to the concn. of the alkali. In the presence of polymeric carbohydrazides NaOH and NH_4OH are peptizers for electroneg. sols, and NaOH is a stronger peptizer than NH_4OH . S. L. M.

CIA-RDP86-00513R001343520015-7"

1ST AND 2ND ORDERS																										2ND AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
60																										2																									
																										A rapid method for the determination of the stability and type of emulsions. B. Puchkovskii and E. Strukova. <i>Alasobolno-Zhirovye Dela</i> 1933, No. 6, 28-9. — The stability and type of margarine emulsions can be detd. by centrifuging a 10-cc. sample for 10 sec. at 1000 r. p. m. E. Hiculous																									
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																										E-2																									
1ST AND 2ND ORDERS																										2ND AND 4TH ORDERS																									
1ST AND 2ND ORDERS																										2ND AND 4TH ORDERS																									

PROCESSES AND PROPERTIES IN THE

The emulsifying properties of lecithin. B. S. Puchkovskii and J. P. Strukova. *Bull. inst. kolloidn. khimii* 1934, No. 1, 93-104; *Chem. Zentr.* 1936, II, 1489-1. Lecithin was shown to be a good emulsifying agent. With sunflower oil-water emulsions, when the proportion of the phases is not changed, then the most stable emulsions are obtained only with the use of definite amts. of lecithin; when larger or smaller amts. of lecithin are used, unstable emulsions are obtained. When the amt. of lecithin is const., the character of the emulsion depends upon the proportion of water and oil. With slight amts. of oil preponderantly oil-in-water emulsions are obtained and with small amts. of water emulsions of water in oil are obtained. The most stable emulsions are obtained when the phases are present in the same ratio as that used in the com. production of margarine.

M. G. Moore

CA

12

PROCESSES AND PROPERTIES INDEX

Application of gold hydrosol to the study of the colloid-chemical properties of meat. B. S. Puchkovskii. *Ukrain. Khim. Zhur.* 9, 149-60 (1934).—The influence of conditions of storage of meat, and of the method of prep. the exts., on the coloration of Au sols have been studied. B C A

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

REVISIONS

LIST AND INDEX																										PROCESSES AND PROPERTIES INDEX																										LIST AND INDEX																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50																												
ca Emulsifying properties of soybean lecithin. B. S. Puchkovskii. <i>Colloid J.</i> (U. S. S. R.) 3, 643-8 (1937); cf. <i>C. A.</i> 32, 3851^a.--The yield of lecithin from soybean flour was 0.62% of the pure product and 1.19% of the impure material. The impure product has the better emulsifying properties. John Livak 13																																																																													
ASME-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																																													

11A

11A

Influence of Congo red on the coagulation of animal proteins by copper salts. B. S. Puchkovskaya. *Colloid J.* (U. S. S. R.) 4, 501-7 (1962). Egg albumin is pptd. by small amts. of 0.1 N or 0.5 N CuSO_4 , but kept in soln. by large amts.; the region of coagulation increases when Congo red is added. The increase is larger in acid than in alk. solns. In acid solns. when the concn. of albumin was small (e. g., 0.012%) the ppts. had peculiar shapes (worms, mushrooms, etc.). J. J. Bakerman

AS 514 METALLURGICAL LITERATURE CLASSIFICATION

11A

COMMON ELEMENTS

OPEN

MATERIALS INDEX

PROCESSES AND PROPERTIES INDEX

The effect of Congo red on the coagulation of animal globulin by copper salts. II. B. S. Puchkovskii. *Colloid J. (U. S. S. R.)* 6, 823-8 (1940); ref. C. 4-33, 6353. Congo red has a greater effect on the coagulation of globulin than on that of albumin. This property may be utilized in the detn. of albumin and globulin in blood and other physiological fluids. A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND LETTERS

3RD AND 4TH LETTERS

5TH AND 6TH LETTERS

7TH AND 8TH LETTERS

9TH AND 10TH LETTERS

11TH AND 12TH LETTERS

13TH AND 14TH LETTERS

15TH AND 16TH LETTERS

17TH AND 18TH LETTERS

19TH AND 20TH LETTERS

21ST AND 22ND LETTERS

23RD AND 24TH LETTERS

25TH AND 26TH LETTERS

27TH AND 28TH LETTERS

29TH AND 30TH LETTERS

31ST AND 32ND LETTERS

33RD AND 34TH LETTERS

35TH AND 36TH LETTERS

37TH AND 38TH LETTERS

39TH AND 40TH LETTERS

41ST AND 42ND LETTERS

43RD AND 44TH LETTERS

45TH AND 46TH LETTERS

47TH AND 48TH LETTERS

49TH AND 50TH LETTERS

51ST AND 52ND LETTERS

53RD AND 54TH LETTERS

55TH AND 56TH LETTERS

57TH AND 58TH LETTERS

59TH AND 60TH LETTERS

61ST AND 62ND LETTERS

63RD AND 64TH LETTERS

65TH AND 66TH LETTERS

67TH AND 68TH LETTERS

69TH AND 70TH LETTERS

71ST AND 72ND LETTERS

73RD AND 74TH LETTERS

75TH AND 76TH LETTERS

77TH AND 78TH LETTERS

79TH AND 80TH LETTERS

81ST AND 82ND LETTERS

83RD AND 84TH LETTERS

85TH AND 86TH LETTERS

87TH AND 88TH LETTERS

89TH AND 90TH LETTERS

91ST AND 92ND LETTERS

93RD AND 94TH LETTERS

95TH AND 96TH LETTERS

97TH AND 98TH LETTERS

99TH AND 100TH LETTERS

ПОДРОБНОСТИ, с. 2.

24422.

Vliyeniye na slovo Na Kooperatsiya Bolkov Solyami Nadi Kollibitsyy Zhurn:1, 1949, Vyp
4, s. 283-89 -- Bibliogr: 11 Nary

SO: INTOPIS No. 34

FU'HKOVSKIY, B. S.

"The Effect of Congo on the Coagulation of Albumins by Copper Salts," Kolloid.
Zhur., 11, No. 4, 1949. Mbr., Poltavo Pedagogical Inst. im. V. G. Korolenko,
-1947-.

AGAFONOV, K.N., inzh.; PUCHKOVSKIY, N.V., inzh.

House built of plastic materials. Biul. tekhn. inform. po stroi.
5 no.5:7-9 My '59. (MIRA 12:8)
(Plastics) (Architecture, Domestic)

KLESHCHEVA, Yelena Pavlovna; GORSHKOVA, Yekaterina Alekseyevna; PUCHKOVA,
Nina Ivanovna; GRACHEV, A.P., red.; LAUT, V.G., tekhn.red.

[Methods of teaching the subjects of oxides, bases, acids, and
salts] Metodika izucheniia okislov, osnovanii, kislot i solei.
Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1960. 102 p.

(MIRA 13:10)

(Chemistry--Study and teaching)

PUCHKOVSKAYA, N.A., prof.

Technic of partial penetrating blepharoplasty. Oft. zhur. 15
no.8:492-495 '60. (MIRA 14:1)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo
instituta glasnykh bolezney i tkanevoy terapii im. akademika
V.P.Filatova (direktor - prof. N.A.Puchkovskaya).
(EYELIDS—SURGERY)

FILATOV, Vladimir Petrovich, vrach, Geroy Sotsialisticheskogo Truda; KORE-
NEVICH, I.A., otv. red.; KAVETSKIY, R.Ye., red.; DANILEVSKIY, A.I.,
red.; MAKARCHENKO, A.F., red.; MERKULOV, I.I., red.; PUGHKOVSKAYA,
N.A., red.; SKORODINSKAYA, V V., red.; NERUSH, A.I., red. izd-va;
GRUDZINSKAYA, O.S., red. izd-va; ROZENTSVEYG, Ye.N., tekhn. red.

[Selected works in four volumes] Izbrannye trudy v chetyrekh tomakh.
Kiev, Izd-vo Akad. nauk USSR. Vol.3. 1961. 368 p. (MIRA 14:7)
(EYE—DISEASES AND DEFECTS) (CORNEA—TRANSPLANTATION)
(TISSUE EXTRACTS)

SHESTERIKOVA, T.P.; PUCHKOVSKAYA, Ye.L.

Peculiarities of protein and lipid metabolism in patients with
vascular diseases of the brain. Vrach. delo no.9:37-41 S '60.
(MIRA 13:9)

1. Odesskiy nauchno-issledovatel'skiy psikhonevrologicheskiy
institut.

(HYPERTENSION)

(PROTEIN METABOLISM)

(LIPID METABOLISM)

FUCHKOVSKIY, B. S.

25624 FUCHKOVSKIY, B. S. Vliyaniye Kongo Na Koagulyatsiyu
Belkov Solyami Medi. Kolloidnyy Zhurnal, 1949, Vyp. 4, S. 265-69--
Bibliogr: 11 Nazv.

So: Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

C A

113

Effect of Congo red on the coagulation of proteins by
copper salts. B. S. Puchkovskii. *Kolloid. Zhur.* 11,
355 (1949). Neutral (methyl orange) solns. of casein
are pptd. by smaller concn. of CuSO_4 than of $\text{Cu}(\text{NO}_3)_2$,
which is more active than CuCl_2 . Congo red promotes
pptn. by Cu salts in neutral, slightly alk., and slightly acid
solns. J. J. Bikerman

PUCHKOVSKIY, B.S.; VERKHOVYKH, I.I.; SKRIPKA, A.I.

Protective action of gelatin and peptone towards sodium potassium tartrobismuthate. Ukr.khim.zhur. 20 no.5:523-526 '54. (MLRA 8:1)

1. L'vovskiy meditsinskiy institut, kafedra obshchey khimii.
(Gelatin) (Peptones) (Bismuthates)

PUCHKOVSKIY, B.S.

Structure formation in the pectin-hydrochloric acid-copper sulfate system. Izv.vys.ucheb.zav.; pishch.tekh. no.3:91-94 '59. (MIRA 12:12)

1. Umanskiy sel'skokhozyaystvennyy institut. Kafedra khimii i tekhnologii.
(Pectins) (Systems(Chemistry))

PUCHKOVSKIY, N., kand.tekh.nauk

Economic factor in cutting construction time. Na stroi.Ros. 3
no.8:27-28 Ag '62. (MIRA 15:12)
(Construction industry)

PUCHKOVSKIY, N.A., starshiy nauchnyy sotrudnik

Shortening the time required to build apartment houses by
using housing construction combines. Trudy MIEI no.15:302-
305 '61. (MIRA 14:12)

1. Leningradskiy filial Akademii stroitel'stva i arkhitektury
SSSR.

(Leningrad—Construction industry)
(Apartment houses)

PORADNYA, A.I., doktor tekhn. nauk; PUCHKOVSKIY, N.V., kand. tekhn.nauk;
KRIVTSOV, V.I., inzh.; LAPIDUS, M.Kh., inzh.; REYZ, M.B., red.
izd-va; ROZOV, L.K., tekhn. red.

[Planning and accounting in housing construction combines]Plani-
rovanie i uchet v domostroitel'nykh kombinatakh; na opyte lenin-
gradskikh DSK. Leningrad, Gos.izd-vo lit-ry po stroit., arkhitekt.
i stroit. materialam, 1962. 102 p. (MIRA 16:2)
(Construction industry) (Apartment houses)

PORADNYA, Anton Iosifovich, doktor tekhn. nauk; PUCHKOVSKIY,
Nikolay Vasil'yevich, kand. tekhn. nauk; POPOV, B.D.,
red.; FREGER, D.P., red.izd-va; BELOGUROVA, I.A., tekhn.
red.

[Present state and prospects for the development of dis-
patching at housing construction combines] Sostoianie i
perspektiva razvitiia dispetcherizatsii domostroitel'-
nykh kombinatov. Leningrad, 1962. 25 p. (Leningradskii
dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opy-
tom. Seriya: Stroitel'naia promyshlennost', no.20)

(MIRA 16:3)

(Construction industry--Production methods)

(Apartment houses--Design and construction)

PORADNYA, A.I., doktor tekhn. nauk, prof.; SHLYAPNIKOVA, A.G.,
inzh.; FUCHKOVSKIY, N.V., kand. tekhn. nauk, nauchn. red.;
DNEPROVA, N.N., red.izd-va; CHERKASSKAYA, F.T., tekhn.red.

[Organization, planning and economics of construction
work] Organizatsiia, planirovanie i ekonomika stroitel'-
nykh rabot. Leningrad, Gosstroizdat, 1963. 258 p.
(MIRA 17:2)

PUCHKOVSKIY, N.V., kand. tekhn. nauk; NEKRASH, N.L., kand. ekon. nauk;
~~FEREL'MAN~~, L.I., inzh.; BAL'MAKOVA, I.K.

Payment only for the finished building is a progressive
form of settlement in the construction industry. Biul. tekhn.
inform. po stroi. 5 no.4:13-15 Ap '59. (MIRA 12:8)
(Construction industry--Accounting)

SUSOV, Vadim Stepanovich; POPOV, Boris Dmitriyevich; PUCHKOVSKIY, N.V.,
kand. tekhn. nauk, red.; PANIVAN, P.S., red. izd-va; GVIRTS,
V.L., tekhn. red.

[Precast transformer substations] Sbornye transformatornye pod-
stantsii. Leningrad, 1962. 16 p. (Leningradskii dom na-
uchno-tekhnicheskoi propagandy. Otkrytiye peredovym opytom. Se-
riia: Stroitel'naya promyshlennost', no.24) (MIRA 16:2)
(Electric substations)
(Precast concrete construction)

Ред. и вып., 3. VI.

2.199

Кытэл обрэдэні дзілі субов варосі, кі адэконтатэушчэнікі дзіла полукроніа
срыгнов на мікротэае. Trudy Voronyezhsk. Zashchita-ta, T. xi, 1944, s. 191-
99. Bibliogr: 5. Nazv.

SC: LETOPIS' NO. 40

PUCHKOVSKIY, V.[Puchkovs'kyi, V.], kand.khim.nauk

~~Do you know~~ chemistry really well? Znan.ta pratsia no.6:22
Je '59. (MIRA 12:11)

(Chemistry--Problems, exercises, etc.)

REF ID: A11011589

SOURCE CODE: 05/0256 06/000/003/0019/0023

AUTHOR: Puchkovskiy, V. M. (Lieutenant Colonel)

ORG: None

TITLE: We are improving combat training [Improving radar training]

SOURCE: Vestnik protivovozdushnoy oborony, no. 3, 1966, 19-23

TOPIC TAGS: ground radar equipment, military training, military personnel, radar interference, nuclear weapon, target tracking

ABSTRACT: The training methods used by one radar battalion to maintain its excellent rating are described. Special attention is given to training under simulated attack conditions in which the enemy uses countermeasures, nuclear weapons, mass attacks. Low level, high level, and small area target tracking is also emphasized. Troops study enemy aircraft and missiles and the combat capabilities and operation of radar, etc., when on duty. Trainers and other automatic teaching aids are widely used. Orig. art. has: 1 figure.

SUB CODE: 05,15/SUBM DATE: None

Card 1/1

PUCHKOVSKIY, V. V.

23198 Ispytaniye izolyatsii elektrocheskikh mashin metodom samorazryada. Elektr. Stantsii, 1949, No. 7, c. 35-37.

SO: LETOPIS' NO. 31, 1949.

PUCHKOVSKIY, V. V.

"Testing the Insulation of Electric Machines by the Self-Discharge Method." Thesis for degree of Cand. Technical Sci. Sub 27 Jun 50, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

V. V. Puchkovskiy, V. V.

AID P - 4020

Subject : USSR/Power

Card 1/1 Pub. 26 - 9/31

Authors : Zuyeva, Z. G. and V. V. Puchkovskiy, Kand. Tech. Sci.

Title : More on testing electric machine insulation.

Periodical : Elek. sta., 11, 33-35, N 1955

Abstract : Tests on 3.15 kv motor insulation were made on a-c and rectified voltage. Coil insulation tests are discussed. Four diagrams present test curves. Two Russian sources, 1953.

Institution : None

Submitted : No date

9225. THE APPROXIMATE RELATIONS FOR THERMAL
BREAKDOWN OF SOLID INSULATING MATERIALS.

V.V. PUSHKOVSKI.

Zh. tekhn. Fiz., Vol. 37, No. 2, 374-8 (1967). In Russian.

The case of a thin plate with dielectric losses concentrated in a central layer is discussed and solved in series form giving the time as a function of increase of temperature. For the case where (i) no heat is imparted to the medium, and (ii) heat losses are independent of temperature, exact solutions are given. Assuming (i) and (ii) simultaneously the temperature changes linearly with time, and for this case the thermal breakdown voltage is found. The formula differs from those of others by a numerical coefficient.

M.W. Makowski

PUCHKOVSKIY, V.V., kandidat tekhnicheskikh nauk.

Self-drying of wetted insulation in an electric field of industrial
frequency. Elek. sta. 28 no.6:36-39 Je '57. (MLRA 10:8)
(Electric insulators and insulation)

KABANOV, I.D., inzhener; KOFNER, A.Ya., inzhener; PUCHKOVSKIY, V.V., kandidat
tekhnicheskikh nauk.

Drying power transformers applying extraneous alternating current.
Elek. sta. 28 no.6:80-81 Je '57. (MLRA 10:8)
(Electric transformers)

PUCHKOVSKIY, V. V.

Docent V. V. Puchkovskiy, Chelyabinsk Institute of Mechanization and Electrification of Agriculture (Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva)

"The dependence of the maximum overheating temperature in the center of the small plate on the temperature of the surrounding air has maxima in the case of a change of this temperature of from 20 - 100° C."

Report presented at a Conference on Solid Dielectrics and Semiconductors, Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichestvo, '58, No. 7, 83-86)

PUCHKOVSKIY, V. V.

Puchkovskiy, V.V. [Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (Chelyabinsk Institute for the Mechanization and Electrification of Agriculture)] Self-drying Moist Dielectrics in an Electric Field of industrial Frequency

(The Physics of Dielectrics; Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1958. 245 p. 3,000 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1956, sponsored by the "Physics of Dielectrics" Laboratory of the Fizicheskiy institut imeni Lebedeva AN SSSR (Physics Institute imeni Lebedev of the AS USSR), and the Electrophysics Department of the Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University).

PUCHKOVSKIY, V.V., kand.tekhn.nauk; BANNIKOV, Yu.I., inzh.

Distribution of voltage in a paper and oil insulation system
relative to self-drying in an electric field of industrial
frequency. Izv.vys.ucheb. zav.; energ. no.6:53-55 Je '58.

(MIRA 11:9)

1.Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'sko-
go khozyaystva.

(Electric insulators and insulation--Testing)

PUCHKOVSKIY, V.V., dots., kand.tekhn.nauk; GLUSHKOV, B.P., inzh.

Seasonal fluctuations of moisture and electric strength of the
oil in operating transformers. Izv. vys. ucheb. zav.; energ.
no.7:26-30 J1 '58. (MIRA 11:10)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'-
skogo khozyaystva.

(Electric transformers)

PUCHKOVSKIY, V.V., dots. kand. tekhn. nauk

Temperature relationship inside damp cardboard during its drying.
Izv. vys. ucheb. zav.; energ. no. 8:59-63 Ag '58. (MIRA 11:11)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo
khozyaystva.

(Paperboard) (Temperature) (Electric fields)

Puchkovskiy V.V.

BANNIKOV, Yu.I., inzh.; PUCHKOVSKIY, V.V., kand. tekhn. nauk.

Self-drying of an insulating material in a nonuniform variable
electric field. Elek. sta. 29 no.2:64-66 F '58. (MIRA 11:3)
(Electric insulators and insulation--Drying)

VOLODIN, M.N., inzh.; NIZAMUTDINOV, R.G., inzh.; ~~PUCHKOVSKIY, V.V.~~, kand.
tekhn. nauk.

Bench testing of wet transformers of low capacity. Elek.sta. 29
no.6:77-79 Ja '58. (MIRA 11:9)
(Electric transformers--Testing)

GLUSHKOV, B.P., inzh.; PUCHKOVSKIY, V.V., kand. tekhn. nauk.

Seasonal fluctuations of moisture and dielectric strength of transformer
oil in operating transformers. Elek. sta. 29 no.10:55-57 0 '58.
(Insulating oils) (Electric transformers) (MIRA 11:11)

PUCHKOVSKIY, V.V., dotsent, kand.tekhn.nauk; MYAKININ, Ye.G., inzh.

Role of the third harmonic in the voltage test curve. Izv.vys.
ucheb.zav.; energ. 2 no.12:25-29 D '59. (MIRA 13:5)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii
sel'skogo khozyaystva. Predstavlena kafedroy proizvodstva
i raspredeleniya elektricheskoy energii v sel'skom khozyaystve.
(Electric insulators and insulation--Testing)

66309

SOV/143-59-4-7/20

~~9(3)~~ 24,7800

AUTHORS:

Puchkovskiy, V.V., Candidate of Technical Sciences,
Docent, and Zuyeva, Z.G., Engineer

TITLE:

Breakdown Strength of Laminated Dielectrics During the
Application of Complex-Wave Voltage

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy - Energetika,
1959, Nr 4, pp 38-42 (USSR)

ABSTRACT:

The article deals with the breakdown strength of laminated media, which were exposed to voltages whose curves showed a complicated course. The graphs show the results of tests which were carried out with double-layer media. The dielectric strength under complicated voltage conditions is then discussed in theory. As a result it was found that the breakdown strength of a laminated dielectric is dependent on the course of the curve of the voltage and that the maximum dielectric strength is contained in this dependency. This means that under certain conditions the dielectric strength is larger, if the voltage curve is complicated, than if it is simple. A double-layer di-

Card 1/2

66309

SOV/143-59-4-7/20

**Breakdown Strength of Laminated Dielectrics During the Application
of Complex-Wave Voltage ...**

electric, which is exposed to a continuously changing voltage, has a curve of its dielectric strength which has two branches and a maximum. There are 6 graphs and 2 Soviet references.

ASSOCIATION: Chelyabinskiy institut elektrifikatsii i mekhanizatsii
sel'skogo khozyaystva (Chelyabinsk Institute for Elec-
trification and Mechanization of Agriculture) 4

Card 2/2

FUCHKOVSKIY, V.V., kand.tekhn.nauk; GLUSHKOV, B.P., inzh.

Question of moisture exchange in operating electric transformers.
Elek. sta. 31 no.3:43-44 Mr '60. (MIRA 13:8)
(Electric transformers) (Insulating oils)

VOLODIN, M.N., inzh.; MYAKININ, Ye.G., inzh.; PUCHKOVSKIY, V.V., dotsent,
kand.tekhn.nauk

Breakdown of the sleeve insulation of electric machinery subjected to
the action of a nonsinusoidal voltage. Izv.vys.ucheb.zav.; energ. 4
no.4:18-24 Ap '61. (MIRA 14:5)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo
khozyaystva. Predstavlena kafedroy proizvodstva i raspredeleniya
elektricheskoy energii.
(Electric machinery) (Electric insulators and insulation)

PUCHKOVSKIY, V.V., kand.tekhn.nauk; GLUSHKOV, B.P., inzh.

Seasonal changes in the characteristic of transformer insulation.
Elek. sta. 32 no.11:73-76 N '61. (MIRA 14:11)
(Electric transformers) (Electric insulators and insulation)

PUCHKOVSKIY, V.V., kand.tekhn.nauk; BANNIKOV, Yu.I., inzh.

Use of model power transformers with moist insulation for studying
voltage redistribution. Elek.sta. 33 no.1:55-57 Ja '62.(MIRA 15:3)
(Electric transformers)

FUCHKOVSKIY, V.V., kand.tekhn.nauk; KOKORIN, G.I., inzh.; NACHEVA, A.I., inzh.;
PILIPPOV, G.A., inzh.

Effect of temperature on the electrical strength of the moist
transformer oil. Energetik. 13 no.4:25-27 Ap '65.

(MIRA 18:6)

PUCHKOVSKIY, V.V., kand. tekhn. nauk, dotsent

External moisture exchange in power transformers with expanders.
Izv. vys. ucheb. zav.; energ. 8 no.5:13-20 My '65. (MIRA 18:6)

1. Ivanovskiy energeticheskiy institut imeni Lenina. Predstavlena
kafedroy elektricheskikh setey i tekhniki vysokikh napryazheniy.

PUCHKOVSKIY, V.V., kand. tekhn. nauk

"Oil saturated paper insulation in high-voltage structures" by
M.A. Dreisukh, G.S. Kuchinskii, D.A. Zaplan, G.I. Meiserman. Reviewed
by V.V. Puchkovskii. Elektrotekhnika 36 no.3:93 of cover No 165.
(MIRA 18.6)

PUCHKOVSKIY, V.V., kand. tekhn. nauk; FILIPPOV, G.A., inzh.

Electrical strength of oil gaps with pulsating voltages. Izv. vys.
ucheb. zav.; energ. 8 no.1:28-33 Ja '65. (MIRA 18:2)

1. Ivanovskiy energeticheskiy institut imeni V.I. Lenina. Predstav-
lena kafedroy elektricheskikh setey, sistem i tekhniki vysokikh
napryazheniy.

PUCHKOVSKIY, V.V.

Moisture transport caused by an internal heat source in a closed system. Inzh.-fiz. zhur. 8 no.3:336-340 Mr '65.

(MIRA 18:5)

1. Energeticheskiy institut imeni Lenina, Ivanovo.

PUCHKOVSKIY, V.V., kand. tekhn. nauk

Testing of transformer insulation in preventive maintenance. Elek.
sta. 35 no.6:36-38 Je '64. (MIRA 18:1)

PUCHKOVSKIY, V.V., kand.tekhn.nauk; MYAKININ, Ye.G., inzh.

Mechanism of the breakdown of insulation in electrical
machines. Izv.vys.ucheb.zav.; energ. 5 no. 8:29-35 Ag '62.
(MIRA 17:7)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii
sel'skogo khozyaystva. Predstavlena kafedroy proizvodstva i
raspredeleniya elektricheskoy energii.

ACCESSION NR: AP4011537

S/0170/64/000/001/0066/0070

AUTHOR: Puchkovskiy, V. V.

TITLE: Features of heat and mass transfer in the presence of a heat source which is dependent on temperature and mass content

SOURCE: Inzhenerno-fizicheskiy zhurnal } no. 1, 1964, 66-70

TOPIC TAGS: heat transfer, mass transfer, infinite plate, internal heat source, moist dielectric plate

ABSTRACT: A system of differential heat- and mass-transfer equations for an infinite plate with an internal heat source is solved. 1) The problem is examined as applicable to a moist dielectric plate in an alternating electrical field and is restricted to the internal problem, assuming the temperature of the medium and the moisture content to be constant. The process is governed by the heat and mass transfer characteristics and similarity criteria, as well as by the varying output of the internal heat source, which requires the introduction of dynamic criteria. The minimum electric field strength producing thermal breakdown is given. 2) Finally, the mean value of the moisture content is found for the steady-state regime, which is in equilibrium only when the argument for a thin plate is vanishingly small. Orig. art. has 19 formulas.

Card 1/2

ACCESSION NR: AP4011537

ASSOCIATION: Energeticheskii institut im. V. I. Lenina, Ivanovo (Power Institute)

SUBMITTED: 18May63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH, AI

NO REF SOV: 001

OTHER: 000

Card 2/2

PUCHKOVSKIY, V.V., kand. tekhn. nauk, dotsent; KOCHETKOV, L.L.; RYZHOV, Yu.A.

Temperature dependence of the resistance of oil barrier
insulation. Izv. vys. ucheb. zav.; energ. 6 no.9:112-115
S '63. (MIRA 16:12)

1. Ivanovskiy energeticheskiy institut imeni V.I. Lenina.
Predstavlena kafedroy elektricheskikh setey, sistem i
transformatorov vysokogo napryazheniya.

PUCHKOVSKIY, V.V.; MYAKININ, Ye.G.

Thermal breakdown of a two-layer dielectric. Inzh.-fiz.zhur. 5
no.9:33-37 S '62. (MIRA 15:8)

1. Institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva,
Chelyabinsk.

(Dielectrics)

AUTHOR: PUCHKOVSKIY, V. V. PA - 2137
 TITLE: On the Problem of the approximated correlations in a Thermal Break-down of Solid Insulating Material. (K voprosu o priblizhennykh sootnosheniyakh pri teplovom proboye tverdykh izoliruyushchikh materialov. Russian).
 PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 2, pp 374 - 376 (U.S.S.R.)
 Received: 3 / 1957 Reviewed: 4 / 1957
 ABSTRACT: Breakdowns at a temperature increase of the insulating material in the course of time, i.e. without thermal equilibrium, and such thermal breakdown in which temperature is stabilized, have to be distinguished upon a level which exceeds thermal stability of the material and leads to a subsequent relatively slow breakdown. An equation is written down for (the case of) onedimensional electric and thermal fields, e.g. a differential equation for thermal equilibrium on the assumption that losses are distributed not in space but on the infinitely thin skin. This equation may be simplified by assuming a series of quantities to be constant, by neglecting the modification of the gradient of the electric field at a change of temperature of the insulating material by not taking account of the modification of temperature distribution according to the thickness of the sample and by assuming the dependence of the angle of the dielectric losses of the material on temperature according to powers. As the solution of differential

Card 1/2

PA - 2137

On the Problem of the approximated correlations in a Thermal Break-down of Solid Insulating Material.

equation presents difficulties, it is shown how to find a general solution. The coefficients occurring therein are shown in form of an attached table. For some special cases this equation leads to exact solutions with regard to temperature. In conclusion, the formula for breakdown voltage is derived which differs from the formula found by FOK and MANTROV by the value of the coefficient before of the root. (1 table).

ASSOCIATION: Institute for Mechanization, Chelyabinsk.

PRESENTED BY:

SUBMITTED: 20.10.1955.

AVAILABLE: Library of Congress.

Card 2/2

PUCHKOVSKIY, V.V., dotsent, kand.tekhn.nauk; ZUYEVA, Z.G., inzh.

Electric strength of a laminated dielectric subjected to a voltage of a complicated curve. Izv.vys.ucheb.zav.; energ. 2 no.4: 38-42 Ap '59. (MIRA 12:9)

1. Chelyabinskiy institut elektrifikatsii i mekhanizatsii sel'skogo khozyaystva.

(Dielectrics)

PUCHKOVSKIY, V.V.

Approximate correlations for the thermal breakdown of solid insulators.
Zhur. tekhn. fiz. 27 no.2:374-376 F '57. (MLRA 10:4)

1. Institut mekhanizatsii, Chelyabinsk.
(Electric insulators and insulation)

PUCHKOVSKIY, V. V.

Gand. Tech. Sci

Dissertation: "Testing the Insulation of Electric Machines by the Method of Self-Discharge."

27/6/50

Moscow Order of Lenin Power Engineering

Inst imeni V. M. Molotov

SO Vecheryaya Moskva
Sum 71

PUCHKOVSKIY, V. V.

Cand Tech Sci

Dissertation: "Testing the Insulation of Electric Machines by the Method of
Self-Discharge."

27/6/50

Moscow Order of Lenin Power Engineering

Inst imeni V. M. Molotov.

SO Vecheryaya Moskva
Sum 71

PUCHKOVSKIY, V. V.

Engr., Chelyabinsk Regional Energetics Admin., -cl948-.

"Discussion of the Article by A. M. Zalskiy, 'Preventative Testing of the Insulation of Electrical Machines," Elektrichestvo, No. 5, 1948;

"Testing the Insulating of Electric Machines by the Self-Discharge Method," Elek. Stants., No. 7, 1949.

3783. ORIENTATION STUDIES OF PEATS IN "TREBON" BASIN. Puchmajerova,
M. (Sbornik Ceskoslov, Akad. Zemedelsko, 1948, vol. 20, 409-
413; title in chem. abstr., 1949, vol. 43, 9413).

KLENKA, L.; KRAUS, H.; PUCHMAYER, V.

Correlation between the cholesterol-phosphatide index of the serum and atherosclerotic changes in the fundus oculi. Cas. lek. cesk. 104 no.27/28:767-771 9 Ji '65.

I. II. oční klinika fakulty všeobecného lékařství Karlovy University v Praze (prednosta akademik J. Kurz), Oční oddelení fakultní polikliniky v Praze (vedoucí doc. dr. L. Klenka, CSc.) a IV. interní klinika fakulty všeobecného lékařství Karlovy University v Praze (prednosta prof. dr. M. Fucik, DrSc.).

REINIS, Z.; BAZIKA, V.; HEYROVSKY, A.; HORAKOVA, D.; SULC, M.; SOUKUPOVA, K.;
FUCHMAYER, V.; KLENKA, L.; KRAUS, H.

Epidemiology of atherosclerosis in the agricultural population
of Northern Bohemia. Cas. lek. cesk. 104 no.38:1029-1034 24 S '65.

1. Angiologicka laborator fakulty vseobecneho lekarstvi Karlovy
University v Praze (vedouci prof. dr. Z. Reinis, DrSc.), IV. interni
klinika fakulty vseobecneho lekarstvi Karlovy University v Praze
(prednosta prof. dr. M. Fucik, DrSc.) a II. očni klinika fakulty
vseobecneho lekarstvi Karlovy University v Praze (prednosta akademik
J. Kurz).

CERMAK, L.; PUCHMAYER, V.; MARCAN, K.; MODROVA, E.; technicka spoluprace
KNOBLOCHOVA, A.; FASSMANOVA, J.

Blood coagulation changes in change of the vascular calibre. Sborn
lek. 65 no.3:65-71 Mr '63.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy
v Praze, prednosta prof. dr. M. Fucik.
(BLOOD COAGULATION) (VASCULAR DISEASES)

POKORNY, J.; PUCHMAYER, V.

Czechoslovakian cardiological congress. Cas.lek. cesk. 103
no.10:275-277 6 Mr'64.

1. IV interni klinika fakulty vseobecneho lekarstvi KU v
Praze; prednosta: prof.dr.M.Fucik.

*

REINIS, Z.; FUCHMAYER, V.; VEHECENK, R.; KUBAT, K.; DUBEN, Z.

Effect of the external environment on experimental atherosclerosis in chicks. Shorn.lek. 62 no.10:291-298 0 '60.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. M.Fucik. II. patologicko-anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. V.Jedlicka. Veterinarni stredisko v Caslavi.

(ARTERIOSCLEROSIS exper)

REINIS, Z.; FUCHMAYER, V.; HRABANE, J.; VANECEK, R.; KUBAT, K.; DUBEN, Z.

Contribution of experimental atherosclerosis in chicks. Sborn. lek.
61 no.11-12:325-330 Nov 59.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy
v Praze, prednosta prof. dr. M. Fucik II patologickoanatomicky ustav
fakulty vseobecneho lekarstvi University Karlovy v Praze. prednosta
prof. dr. V. Jedlicka Okresni veterinarni stredisko, Caslav.
(ARTERIOSCLEROSIS, exper.)

REINIS, Z.; PUCHMAYER, V.; SULC, M.; DUBEN, Z.

Effect of estrogens on the lipid metabolism in fowls. Sborn. lek.
64 no.11:340-346 N '62.

1. IV interni kliniki fakulty vseobecneho lekarstvi University
Karlovy v Praze, prednosta prof. dr. M. Fucik Angiologicka laborator
fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta
prof. dr. B. Prusik Vyzkumna laborator veterinarniho strediska,
Havlickuv Brod.

(ESTROGENS)

(LIPID METABOLISM)

DUDEN, Z.; REINIS, Z.; PUCHMAYER, V.; SULC, M.; KUBAT, K.; VANECEK, R.

Ecological factors in experimental arteriosclerosis in fowl.
Sborn. Lek. 66 no.5:125-136 Ap '64.

1. IV. interni klinika fakulty vseobecneho lekarstvi University
Karlovy v Praze (prednosta prof. dr. M. Fucik), II. patologicko-
anatomicky ustav fakulty vseobecneho lekarstvi University
Karlovy v Praze (prednosta prof. dr. V. Jedlicka, DrSc.) a
Veterinarni laborator v Havlickove Brode, oddeleni pro choroby
drubeze.

PUCHMAYER, V.; REINIS, Z.; LOJDA, Z.; SULC, M.; DUBEN, Z.

Effect of estrogenization on experimental arteriosclerosis
of roosters. Cas. lek. Cesk. 104 no.49/50:1360-1365 10 D '65.

1. IV. interni klinika fakulty vseobecneho lekarstvi Karlovy
University v Praze (prednosta prof. dr. M. Fucik), Angiologicka
laborator pri IV. interni katedre Fakulty vseobecneho lekarstvi
Karlovy University v Praze (vedouc' prof. dr. Z. Reinis) a
Ustredni statni veterinarni ustav v Praze.

PUCHMAYER, Vladimír

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: MD

Affiliation: Fourth Internal Clinic, Faculty of General Medicine, Charles University
(IV. interni klinika fakulty všeobecného lékařství KU) /Chief Prof Dr
FUCIK/ Prague

Source: Praktický Lekar, Vol. 41, No 15-16, Aug 21, 1961; pp 665-666

Data: "Cases of Poisoning treated at the Fourth Internal Clinic in Prague"

✓RIEDL, Ota

✓PUCHMAYER, Vladimír

GPO 981643

REINIS, Z.; PUCHMAYER, V.; PROCHAZKA, B.; DUBEN, Z.; VANECEK, R.; KUBAT, K.

Effect of nutrition and physical activity on experimental atherosclerosis in chicks. Cas.lek.cesk 100 no.22:670-677 2 Je '61.

1. IV. interni klinika KU v Praze, prednosta prof. dr. M. Fucik,
Veterinarni sprava Havlickov Brod, II. patologickoanatomicky ustav
KU v Praze, prednosta prof. dr. V. Jedlicka.

(ARTERIOSCLEROSIS exper)

REINIS, Z.; PUCHMAYER, V.; SEDLAKOVA, E.; SULC, M.; VANECEK, R.; KUBAT, K.;
TRAVNICKOVA, E.

Effect of chlortetracycline on experimental atherosclerosis in rabbits.
Cas.lek.cesk 100 no.37:1153-1156 15 S '61.

1. IV. interni klinika, Angiologicka laborator, II. patologickoanatomicky
ustav, Fyziologicky ustav KU v Praze.

(CHLORTETRACYCLINE pharmacol)
(ARTERIOSCLEROSIS exper)

PUCHMAYER, Vladimir

Experimental atherosclerosis in chicks as a biological model of
human atherosclerosis. Cas.lek.cesk 100 no.29/30:916-922 14 JI '61.

1. IV. interni klinika KU v Praze, prednosta prof. dr. M. Fucik.

(ARTERIOSCLEROSIS exper)

SULC, M.; PUCHMAYER, V.

Effect of prolonged feeding of a cholesterol diet on the level of blood lipids in cocks and chicks under different ecological conditions. Sborn. Lek. 66 no.5:150-155 Ap '64.

1. Angiologická laborator fakulty všeobecného lékařství
University Karlovy v Praze (ředitel prof. dr. Z. Reinis,
DrSc.) a IV. interní klinika fakulty všeobecného lékařství
University Karlovy v Praze (prednosta prof. dr. M. Fucik).

FUCHNAR, B.

"Production of hollow articles from aluminum and aluminum alloys. P.108."
HUDNIK, Vol. 3, No.5, May 1953, Czechoslovakia.

SO: Monthly List of East European Accessions, L.C.Vol. 2, No.11, Nov. 1953
Uncl.

PUCHNAR, B.

rolling, stamping,
drawing & pressing

Technology of the Manufacture of Bars and Tubes by Cold-
Drawing. B. Puchnar. (Hutník (Prague), 1963, 8, (6), 120-
126) [in Czech]. Relations are derived between the changes
in the dimensions of tubes and rods associated with various
degrees of cold reduction. Nomograms for a rapid deter-
mination of lengths and diameters are given. —P. 7.

FUCHNAR, B.

"Technology of the Production of Bars and Pipes by Cold Drawing.", p. 126 (Hutnik,
Vol. 3, no. 6, June, 1953, Praha.)

SG: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress,
February 1954, Uncl.

PUCHNAR, B.

"Some Ways of Economizing on Aluminum and Aluminum Alloys." p. 204 (Hutník, Vol. 3, no. 9, Sept. 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress, Feb. 1954, Uncl.

PUCHNAR Badrich

21d-12. Elinikova folie. (Aluminum foil.) Badrich Puchnar. Technické
listy, v. 3, April-May 1948, p. 115-116,

Production and properties.

Immediate source clipping

3d-42. Tvarene polotovary z hliniku a z hlinikovych slitin. (Formed Aluminum Products and Semifinished Shapes) R. Henych and R. Lachnat. *Hutnický Listy*, v. 3, April-May, 1948, p. 109-115.

Composition, mechanical properties, and other characteristics determining the applications of products made in Czechoslovakia.

11d-12. Hlinikova folie. (Aluminum)

Foll.) Bedřich Puchnar. *Hutnícke*
Listy, v. 3, April-May 1948, p. 115-116.
 Production and properties

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

11d-12. Hlinikova folie. (Aluminum)

Foll.) Bedřich Puchnar. *Hutnícke*
Listy, v. 3, April-May 1948, p. 115-116.
 Production and properties

CA

9

Impact resistance of case-hardened gear teeth. V. Koblelev and O. Puchner. *Strojnicky Obzor* 1947, 27-30, 140-53.—Tests were made on steel specimens (20 X 20 X 60 mm.) recessed at both ends to a depth of 7.6 mm. to form 2 strips each 6 mm. wide to represent teeth. The bottoms were rounded off with a radius of 0.9 mm. to correspond with practical conditions at a modulus of 3.5. Three steels (26 specimens) were tested contg. C 0.15, 0.13, and 0.24; Mn 0.34, 0.92, and 1.24; Si 0.19, 0.21, and 0.2; P 0.37, 0.22, and 0.026; S 0.222, 0.024, and 0.022; Cr 0.15, 0.87, and 1.35; and Ni, 0.08, trace, and 0.13%. The specimens were heat-treated in 3 different ways and quenched in oil,

H₂O, or in a salt-bath at 140-200°. Impact tests were made with a standard Izod machine. After the teeth had been broken off, the structures and hardness values of the core and hardened layer were detd. and the surface of the break was examd. The results showed that the case-hardened layer should be as thin as possible, the optimum value being 10% of the tooth thickness, but for very high strength steel it should be even thinner. Removal of the hardened layer on the front of the teeth increases the impact resistance of the tooth by approx. 30%. Tempering in salt-baths does not affect impact resistance. The optimum hardening temp. for C steels is above the Ac3 point of the core; tempering from temps. above the Ac1 point but below the Ac3 point of the core gives much lower impact values. For alloy steels, the data show no appreciable difference between values obtained for single and double hardening at temps. above the Ac3 point. No information was obtained on the influence of free carbides and carbide network structures; in very thick case-hardened layers their influence is negligible.

B. A.

1951

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
5. 18 IMPACT RESISTANCE OF CASE-HARDENED GEAR TEETH. V. Koselev and O. Puchner. (Strojnický Obzor, 1947, no 2, pp 27-30; no 6, pp 146-153). (in Czech). A series of tests has been carried out in the laboratories of the Skoda Works to obtain information on the influence of the base material, the quality and thickness of the case-hardened layer, the heat-treatment, and also that of grinding-off the the heat-treatment, and also that of grinding-off the case-hardened layer from the front part of the tooth, on the properties of gear teeth. The tests were carried out on specially prepared specimens, 20 x 20 x 60 mm, recessed at both ends to a depth of 7.5 mm to form two strips each 6 mm wide to represent the teeth to be tested. The bottoms were rounded off with a radius of 0.9 mm to correspond to practical conditions at a modulus of 3.6. These specimens were specially designed to facilitate reliable fixing in the testing machine, thus eliminating a possible source of error in measurement. The tests were limited to factors which were known, or																			
A 58-51A METALLURGICAL LITERATURE CLASSIFICATION										FROM ROMANOV									
FROM STROJNICKÝ										FROM STROJNICKÝ									
FROM STROJNICKÝ										FROM STROJNICKÝ									

considered very likely, to have a decisive influence on the strength of the teeth. Even so, it was necessary to prepare 216 specimens. The specimens were of three steels with the following compositions:

	C, %	Mn, %	Si, %	P, %	S, %	Cr, %	Ni, %
A ...	0.15	0.34	0.19	0.37	0.022	0.15	0.08
B ...	0.13	0.92	0.21	0.022	0.024	0.87	traces
C ...	0.24	1.24	0.20	0.026	0.022	1.35	0.13

The following heat-treatments were applied: (1) Tempering above A_{c1} of the case-hardened layer but below A_{c3} of the core material; (2) standard double tempering, once above A_{c3} of the core and a second time below A_{c1} ; and (3) tempering only once, above A_{c3} of the core. Most of them were quenched in oil, but water was also used. A series of specimens was quenched in a bath of molten salt at 140-200°C. The impact tests were carried out with a standard Isod machine. After the teeth of the specimens had been broken off, the structures and hardnesses of the core and hardened layer were determined, and the surface of the break was examined. The following conclusions were arrived at: The case-hardened layer should be as thin as possible, a depth of 10% of the tooth thickness being about the optimum

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
IMPACT RESISTANCE OF CASE-HARDENED GEAR TEETH. (Continued) value. For steel of very high strength this layer should be made thinner still. Removal of the hardened layer on the front of the teeth increases the impact resistance of the tooth considerably, on the average by about 30%. Tempering in salt baths did not influence the impact resistance. The optimum tempering temperature for carbon steels is above A_{c3} of the core, whilst tempering from temperatures above A_{c1} (below A_{c3} of the core gives far lower impact values. For alloy steels the test results revealed no appreciable difference between the values obtained for single and double tempering at temperatures above A_{c3}. No relevant information was obtained on the influence of free carbides and carbide network structures; in very thick case-hardened layers their influence is negligible.—E.G.																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			

Z/032/63/013/001/002/004
E193/E135

AUTHORS: Tesar S., Engineer, and
Puchner O., Professor Engineer, Doctor of Sciences.

TITLE: Increasing the fatigue strength of welded components
by induced internal stresses

PERIODICAL: Strojirenství, v.13, no.1, 1963, 21-31

TEXT: The use of high-grade steels does not in general increase the fatigue strength of welds, and may even reduce it, due to notch sensitivity. The methods currently used to improve the fatigue strength of welded components either reduce the local stress concentrations by suitable design, or make use of a surface treatment to counteract the effect of the stress concentrations. The published results of numerous tests are reviewed, and it is concluded that, due to introduction of internal stresses, localized heating leads to considerable improvement in fatigue strength of rod-shaped components with a notch. This is in agreement with the theory concerning the effect of internal stresses on fatigue strength. Localized heating is effective on steels of all types, and on aluminium alloys. Earlier work by the author
Card 1/3

Increasing the fatigue strength ...

Z/032/63/013/001/002/004
E193/E135

has shown that the mechanical strength at room temperature is almost unaffected by localized heating, but F. Faltus has found that the tendency to brittle fracture at low temperatures is somewhat reduced. The improvement in fatigue strength is more pronounced with steels having greater mechanical strength (i.e. higher yield points), and therefore, assuming that they have the same notch fatigue strength as the weaker steels, the effect of internal stresses is less deleterious. It is anticipated that even better results will be obtained when steels of still greater mechanical strength are tested; no results have been obtained on such steels so far. Care must be taken to avoid hardening during cooling of the localized heated regions. The behavior of components subjected to localized heating still requires investigation under conditions where the stress amplitude is varied, or the stress has a variable asymmetry. Excellent results have also been achieved by forcing the specimen over a mandrel (or through a die), so plastically compressing the outer layers: after removal of the mandrel (or die) the residual induced internal stresses, although smaller in magnitude than those

Card 2/3